

Amendment dated March 8, 2010

Reply to Office Action of December 8, 2009

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled).

2. (Currently Amended) A method for controlling an operation of a compressor of a refrigerator, the method comprising:

varying a compression capacity of a compressor installed in a refrigerator by controlling a rotation direction of the compressor according to a load condition of the refrigerator, wherein the compression capacity of the compressor increases when the compressor is rotated in a first rotation direction with respect to a rotational axis of the compressor and decreases when the compressor is rotated in a second rotation direction that is opposite to the first rotation direction, and wherein the controlling the rotation direction of the compressor comprises:

performing a defrosting operation when a temperature inside the refrigerator and a pre-set defrosting temperature are identical;

when the defrosting operation is terminated, rotating the compressor in the first rotation direction, ~~and repeatedly stopping the compressor,~~ and rotating the compressor in the second rotation direction at pre-set time periods; and

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when an operation mode of the refrigerator is selected by a user, selecting the rotation direction of the compressor according to an amount of cooling air supply corresponding to the selected operation mode, and controlling a rotation speed of the compressor in the selected rotation direction by varying an operation frequency of the compressor based on a temperature inside the refrigerator;

when the operation mode of the refrigerator selected by the user is a power saving operation mode, rotating the compressor in the second rotation direction, and when the temperature inside the refrigerator is higher than a pre-set temperature, rotating the compressor in the first rotation direction; and

when the operation mode of the refrigerator selected by the user is a standard operation mode, rotating the compressor in the first operation direction, and when the temperature inside the refrigerator reaches the pre-set temperature, rotating the compressor in the second rotation direction.

3-4. (Canceled).

5. (Currently Amended) The method of claim-4_2, further comprising:

when the compressor is rotated in the first rotation direction according to the operation mode of the refrigerator, detecting a current applied to the compressor, and if the detected current is greater than a pre-set reference current, rotating the compressor is-continuously

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~~rotated~~ in the first rotation direction, and if the detected current is smaller than the reference current, turning off the compressor ~~is turned off~~; and

when the compressor is rotated in the second rotation direction according to the operation mode of the refrigerator, detecting a current applied to the compressor, and if the detected current is smaller than the pre-set reference current, rotating the compressor ~~is continuously~~ ~~rotated~~ in the second rotation direction, and if the detected current is greater than the pre-set reference current value, turning off the compressor ~~is turned off~~.

6. (Currently Amended) The method of claim-42, further comprising:

sensing the rotation direction of the compressor; and

if the rotation direction of the compressor needs to be changed according to a change of a temperature of the refrigerator, stopping the operation of the compressor for a predetermined time period and then changing the rotation direction of the compressor.

7. (Canceled).

8. (Currently Amended) The method of claim-72, further comprising:

setting an operation range of a temperature sensor that senses the temperature inside the refrigerator according to the rotation direction of the compressor; and

sensing the temperature inside the refrigerator according to the set operation range.

9. (Previously Presented) The method of claim 8, wherein when the compressor is rotated in the first rotation direction, the operation range of the temperature sensor is -0.5°C~+0.5°C.

10. (Previously Presented) The method of claim 8, wherein when the compressor is rotated in the second rotation direction, the operation range of the temperature sensor is -0.3°C~+0.3°C.

11. (Previously Presented) The method of claim 8, wherein a refrigerant amount of the refrigerating cycle of the refrigerator is set as an amount of a refrigerator of the compressor when the compressor is rotated in the second rotation direction.

12. (Previously Presented) The method of claim 8, wherein a refrigerant amount of the refrigerating cycle of the refrigerator is calculated when a temperature of an evaporator of the refrigerator and a temperature of an entrance of the evaporator are identical while the compressor is being rotated in the second rotation direction, and the calculated refrigerant amount is set as a refrigerant amount of the compressor.

13-35. (Canceled).